

REMARKS/ARGUMENTS

The Examiner maintained the restriction requirement. Accordingly, Applicant hereby cancels Claims 21 and 22. Applicant preserves the right to pursue a divisional application for these method claims.

The disclosure was objected to because of a misspelling in the word "weir". All instances of this misspelling have been corrected in the amendment to the specification. Therefore, this objection should be withdrawn.

The Examiner objected to Claims 3 and 13 again for the misspelling of the word "weir". Claims 3 and 13 have been amended accordingly; therefore, this objection should be withdrawn.

Claims 1-6, and 8-9 were rejected under 37 U.S.C. § 102 as being anticipated by Plantes et al. Claim 1 has been amended to further recite that a plurality of reaction plate tabs are integral with a selected corresponding plurality of reaction plates, the source of power is a DC source, and wherein at least two of the plate tabs are connected to the DC power source, but less than all of the tabs are connected. As disclosed in Plantes et al., the electrocoagulation device has three electrocoagulation modules provided in parallel for electrocoagulation of a liquid stream. Each module comprises, preferably, twelve pairs of electrodes 20. Each electrode is separately connected to a source of alternating current at its ear 22. As shown in Figure 4, members 24 and 26 supply alternating current from a remote source to each of the ears 22 of the electrodes 20 to complete a circuit across each electrode. Accordingly, each pair of electrodes 20 in each module is separately connected to a source of electrical power so that a pair of electrodes may be removed without altering the circuits across the remaining electrodes in that particular

module. Each of the electrodes 20 are coupled as pairs to form a mating assembly 28. Each pair of electrodes is isolated within a module by a barrier plate 34. Plates 34 divide the modules into twelve separate electrode contained cells, each electrode in each cell being separately coupled to a source of the alternating current power. The barrier plates 34 add surface area within the modules to cause potential clogging thus requiring a greater flow head to overcome the added resistance.

It is an express objective in Plantes to use only an alternating current for a power source. The particular problem identified in Plantes et al. was removal of colloidal clays. Electrocoagulation powered by alternating current neutralizes the magnetic or electrostatic forces which hold particles in colloidal suspension. (Col. 4, Ins. 8-10). The express objective of Plantes is further stated at Col. 4, Ins. 57-64,

“it is another object of this invention to provide an electrocoagulator which will treat waste water having colloidal clays therein at low or high volume flow rates as, for example, 200 gallons per minute per module, to subject the suspended solids therein to the collapsing field of alternating current whereby the suspended forces will be broken so that the colloidal particles will agglomerate and settle out”.

Another express objective stated in Plantes et al. is found at Col. 4, Ins. 65-69, and Col. 5, Ins. 1-3,

“it is another object of this invention to provide an electrocoagulator comprising a plurality of closely spaced electrode plates defining a plurality of flow paths therebetween which will rapidly treat high volumes of waste water by establishing an alternating current across electrodes and through a flow path therebetween.”

Again at Col. 5, lns. 10-14, Plantes restates the objective of the invention wherein use of an alternating current field at an optimal current density at the electrode faces facilitates production of a rapidly settling flock from wastewater containing colloidal particles.

It is clear within Plantes et al. that there are two reasons why alternating current as a source of power is required: (1) the alternating current has a collapsing field/continual change in polarity thereby neutralizing the magnetic or electrostatic forces which hold particles in colloidal suspension; and (2) in order to treat the high volume flow rates considering the closely spaced electroplates, use of an alternating current is a requirement because providing DC power to each of the pairs of electrodes would require truly an astounding amount of amperage to maintain the electrodes at the desired voltage. Although this second reason is not stated in Plantes, those skilled in the art will conclude that DC power is simply infeasible within the invention disclosed in Plantes. Claim 1 requires direct current as a source of power. Therefore, Plantes cannot anticipate Claim 1. Additionally, because Claim 1 requires that less than all of the tabs be connected to a source of power; this further distinguishes the present invention from Plantes because, in Plantes, each reaction plate is connected to the source of power (see Figure 4 and the corresponding description thereof). Claims 2-6 and 8-9 depend from Claim 1 and claim other features. Therefore, this rejection under Section 102 should be withdrawn.

Claims 5, 10-16 and 18-20 were rejected under 35 U.S.C. § 103 as being unpatentable over Plantes et al., and further in view of Allen. In short, the Examiner stated that Plantes failed to specifically teach that the reaction plate tabs include tab extensions that extend through a lower portion of the housing.

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Claim 11 has been amended similar to Claim 1 in requiring that a source of DC power be provided, as well as that less than all of the plate tabs are connected to the source of power. Therefore, for the same reasons as set forth above with respect to the rejection under Section 102, this rejection should also be withdrawn. Allen clearly fails to remedy the deficiencies of Plantes et al.

Additionally, Applicant believes there is no fair teaching or suggestion to combine the references to obviate the claims. In short, the primary reference (Plantes et al.) would have to be so completely reconstructed by the addition of Allen, that it could not be obvious to combine the references. More specifically, in order for plate tabs in Plantes to extend through a bottom portion of the housing, the entire bottom portion of Plantes would have to be reconstructed by modifying the chamber 60, and also modifying plate 48 and the manner in which the pairs of electrodes are sealed by gasket 52. Therefore, this rejection should be withdrawn.

Applicant gratefully acknowledges the allowability of Claims 7 and 17.

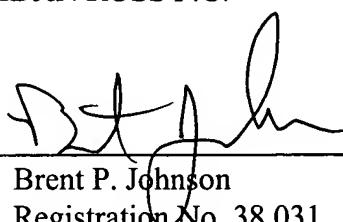
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Applicant has made a sincere effort to place this application in a condition for allowance; therefore, such favorable action is earnestly solicited. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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